



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,075	10/19/2000	Ken Harris		6304

7590 04/24/2002
Michael A. Cantor, Esq
Cantor Colburn LLP
55 Griffin Road South
Bloomfield, CT 06002

EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
----------	--------------

1756

8

DATE MAILED: 04/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/692,075

Applicant(s)

HARRIS, KEN

Examiner

Martin J Angebrannndt

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/14/2000, 10/19/2000, 3/19/2001, 4/3/2001 + 4/15/2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/15/02 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2 The specification is objected to under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Features critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The specification attempts to incorporate essential subject matter by reference to non U.S. patent literature. This is not permitted See MPEP 608.01(p)(A) and 2163.07(b).

The appendices are an improper method of incorporating information into a patent applicant as it represents a **clear violation of copyright**. These references have been made of record in the PTO-1449 or PTO-892.

The examiner's position is that if it is important enough to include verbatim from the source, rather than merely cited on a PTO 1449, the matter might be considered essential and should be paraphrased and inserted directly into the specification and that **this position protects the applicant from additional litigation issues and costs arising from choosing the riskier alternative which assumes that the material is non-essential and will never become essential**. This is particularly important if any of this material which the applicant currently feels is non-essential should later become critical to the patentability of the claims. The applicant is permitted to paraphrase and insert this matter into the specification on the basis of MPEP 2163.07 and 2163.07(b). The examiner notes that appendix A describes specific useful polyimides.

On the issue of the copyright violation, the USPTO does not publish copyrighted material without the express written approval of the copyright holder. Section 608.01(v) supports the examiner's position and without appropriate action on the part of the applicant, a patent will not publish.

3 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4 Claims 2-9,15,18-21,25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, "developeable" should read - - developable - - .

In claim 3, "photo detection" should be replaced with - - exposure- - .

In claim 7, the claims should indicate that the photodefined polyimide is derived from a positive acting photo-definable polymide.

In claims 15 and 18, step (c) in claim 10 is not a curing step.

In claims 20 and 21, the claims should indicate that these steps result in a duplicate stamper.

Claim 25 is incongruent with claim 10 as the surface must be used as a stamper and a novelty applied as the stamper surface and used in a stamping process and still be considered a mere embellishment.

Claim 26 should indicate that the transfer medium is cast onto a surface, the data transferred into the transfer medium and then the transfer medium is used to emboss or stamp the data into another surface.

Art Unit: 1756

In claim 28, the polyimide is the embossing surface and the claim should reflect this.

In claim 29, the polyimide is the embossing surface and the claim should reflect this.

In claim 30, printing cannot be achieved without reciting an ink. (19/1-12 in the specification).

5 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7 Claims 1-3,5-7 and 9 are rejected under 35 U.S.C. 102(b) as being fully anticipated by IBM Technical Disclosure Bulletin Vol. 30(3) pp. 1392-1393 (08/1987).

The formation of a holographic surface relief grating including spin coating a photosensitive polyimide, pre-baking at 85 degrees C, exposing the polyimide with light from a HeCd laser to record the holographic image, and a postbaking/development at 225 degrees C.

Based upon the post-baking/development, the examiner holds that the surface is sufficiently hardened for embossing or printing. Please note post curing in the specification at 280-400 degrees on page 17.

8 Claims 28-30 are rejected under 35 U.S.C. 102(b) as being fully anticipated by, or in the alternative obvious over JP 59-123836.

A polyimide containing photosensitive composition is used to form a printing plate.

The examiner holds that either the printing plate was used in the examples thereby anticipating all the limitations of the claims or alternatively, it would have been obvious to do so based upon its sole disclosed use in the abstract.

9 Claim 10,16,19,20,22 and 24-26 is rejected under 35 U.S.C. 102(b) as being fully anticipated by Schlesinger et al. '635.

Schlesinger et al. '635 teaches an interferometric exposure to form the holographic image and the in example 5 and either the coating a thin conductive layer and electroplating the resulting image with nickel to form a stamper and the use thereof (15/3-11) or the use of the resist image directly to emboss materials softened by heating. (15/12-44 and example 6. Holograms can include images and or text stored holographically.

It is not clear if claim 26 intends to claims that the image is recorded by molding or if the casting step merely covers the formation of the film, which is used to form the embossing medium. This rejection covers the latter possibility.

10 Claim 10,16,19,22 and 24-26 is rejected under 35 U.S.C. 102(b) as being fully anticipated by Shvartsman '689.

Shvartsman '689 describes the coating of a photohardenable film on a substrate , embossing a pattern into it , curing it while in contact, peeling and transferring the relief image in the photohardened film to another surface by stamping. (8/56-9/21) The use of roller or flat die shapes is disclosed. (9/22-55). See also the examples. Holograms can include images and or text stored holographically.

11 Claims 1-6 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Nakano et al. '117.

Nakano et al. '117 describes the process of using the inventive resin to form printing plates. Printing plates are known to include both text and pictures as images so that magazines and newspapers produced using these may have either or both. (5/59-6/37).

12 Claims 1-7 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sassmannshausen et al. '768.

Sassmannshausen et al. '768 teaches the use of positive polyimide resists for fabricating relief structures useful in fabricating microelectronics and printing plates. (1/11-30). Processing of the polyimide resists includes coating, pre-baking at 50-120 degrees C, exposure, aqueous alkaline development and post-baking at 200-400 degrees C. (6/23-7/39).

It would have been obvious to one skilled in the art to use the positive acting polyimide compositions to form printing plates and to use them form printing based upon the disclosure to do so within the reference.

Art Unit: 1756

13 Claims 1-7 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al. '736.

Mueller et al. '736 teaches the use of positive polyimide resists for fabricating relief structures useful in fabricating microelectronics and printing plates. (4/1-17 and 12/18-32). Processing of the polyimide resists includes coating, pre-baking at 90 degrees C, exposure, aqueous and alkaline development. (example 5).

It would have been obvious to one skilled in the art to use the positive acting polyimide compositions to form printing plates and to use them form printing based upon the disclosure to do so within the reference.

14 Claims 1-20,22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Schlesinger et al. '635 or Shvartsman '689, in view of Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768.

Kataoka et al. JP 08-039572 teaches the use of a patterned polyimide on the interior surface of a mold. These are pre-heated at 50 degrees and post-baked at 240 degrees in the examples. [0031].

It would have been obvious to one of ordinary skill in the art to use the polyimides and process thereof taught by Kataoka et al. JP 08-039572 to form embossing surfaces as taught by either Schlesinger et al. '635 or Shvartsman '689 based upon the similarity between molding and embossing within these references and the teachings of either Schlesinger et al. '635 or Shvartsman '689 that photoresist materials are useful as embossing surfaces and the teachings of Kataoka et al. JP 08-039572 that polyimides are useful as molding surfaces. Further, it would have been obvious to use known processing techniques for pre-curing, exposing, developing and

post-curing polyimides such as those taught by Sassmannshausen et al. '768 with a reasonable expectation of forming a useful image.

15 Claims 1-20,22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Schlesinger et al. '635 or Shvartsman '689, in view of Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768, and further in view of Muzino et al. '329 and IBM Technical Disclosure Bulletin Vol. 30(3) pp. 1392-1393 (08/1987).

Mizuno et al. '329 teaches molding gratings of polyimide. (17/34-38).

It would have been obvious to one skilled in the art to use either molding or direct patterning of the polyimide to form patterns in the polyimide for the purposes of embossing in the process of either Schlesinger et al. '635 or Shvartsman '689 combined with Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768, based upon the disclosure within the art that the photosensitive resins may be either patterned with development as shown in Kataoka et al. JP 08-039572 and IBM Technical Disclosure Bulletin Vol. 30(3) pp. 1392-1393 (08/1987) or photocured in a mold as taught by Muzino et al. '329. The showing of the formation of gratings in particular establishes the equivalence of the techniques within the art.

16 Claims 1-22 and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Schlesinger et al. '635 or Shvartsman '689, in view of Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768, and further in view of JP 01-142077 and/or De Graaf et al. '607.

JP 01-142077 teaches the formation of stampers by electroplating with either nickel or chromium. (abstract)

De Graaf et al. '607 teaches a resist used as a matrix for embossing or molding where the resist is coated with a thin film of Al or Cr. (example II and 5/29-36).

Art Unit: 1756

It would have been obvious to modify the processes of either Schlesinger et al. '635 or Shvartsman '689, in view of Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768 by using chrome as the electroformed metal rather than nickel based upon the disclosure of equivalence by JP 01-142077 and/or coating the surface of the resist with thin coatings of metals either to provide a conductive surface for the electroforming as taught by JP 01-142077 or to provide a more robust surface for stamping as taught by De Graaf et al. '607.

17 Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Schlesinger et al. '635 or Shvartsman '689, in view of Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768, and further in view of JP 01-142077 and/or De Graaf et al. '607 and Abraham '282.

Abraham '282 teaches the formation of dot matrix gratings or regular gratings in photoresists and the use of these as stampers. (3/11-50)

In addition to the basis provided above, the examiner holds that it would have been obvious to use the processes of Schlesinger et al. '635 or Shvartsman '689 combined with Kataoka et al. JP 08-039572 and Sassmannshausen et al. '768, and JP 01-142077 and/or De Graaf et al. '607, such as dot matrix holograms as the image to be formed in the stampers based upon the teachings of the formation of these holograms in stamper surfaces by Abraham '282.

18 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebrannndt whose telephone number is 703-308-4397. The examiner can normally be reached on Mondays-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the

Art Unit: 1756

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Martin J Angebranndt
Primary Examiner
Art Unit 1756

April 19, 2002